Data Science, Certificate

ASDTSCERT

Do you see the power in numbers and data? This program gives you tools and insights to leverage data in decision-making.

Description

The data science certificate program combines the strengths of database skills with interdisciplinary computational statistics.

The program provides students with an understanding of the computational and statistical methods used to extract insights from complex datasets and provides hands-on experience with them. In particular, it includes courses that cover key techniques for the different stages of the data science process: data collection, data processing for small and big data, data cleaning, exploratory data analysis, data visualization, predictive modeling with machine learning techniques, and statistical modeling.

At a glance

- **College/School:** New College of Interdisciplinary Arts and Sciences
- **Location:** West Valley

Program requirements

2024 - 2025 Certificate Map
Certificate Map (Archives)

The certificate in data science consists of 15 upper division credit hours of coursework. A minimum of six upper-division credit hours must be completed through courses offered by the School of Mathematical and Natural Sciences. A maximum of six credit hours may be shared between the certificate and major coursework. All courses used to satisfy requirements for the certificate must be passed with a "C" (2.00) or better.

Required Courses -- 9 credit hours

ACO 320: Database Systems (3)
ACO 423: Data Science (3)
STP 315: Statistical Computing (3)

Electives (choose two) -- 6 credit hours

ACO 321: Database Development & Applications (3)
ACO 420: Big Data Systems (3)
BMI 311: Modeling Biomedical Knowledge (3)
BMI 312: Modeling Biomedical Data (3)
MAT 422: Mathematical Methods in Data Science (3)
STP 310: Design and Analysis of Experiments (3)
STP 311: Regression and Time Series Analyses (3)

Prerequisite courses may be needed in order to complete the requirements of this certificate.

Enrollment requirements

Prerequisites for this certificate are:

ACO 201 Data Structures and Algorithms
MAT 243 Discrete Mathematical Structures or MAT 300 Mathematical Structures
STP 226 Elements of Statistics

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

Career opportunities

A certificate in data science helps prepare students who have an interest in databases and statistics. Possible careers include data scientist, machine learning scientist or engineer, applications architect, data architect and data engineer.

Contact information

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